GROWING OUR OWN:
THE SOCIOECONOMIC VALUE OF COMMUNITY FOOD PRODUCTION

MADISON AREA COMMUNITY GARDENING: EXECUTIVE SUMMARY

Prepared for
Community Action Coalition for South Central Wisconsin

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OVERVIEW

In the summer of 2008 I began a study at the University of Wisconsin-Madison to explore the role of community food production (CFP) in the Madison, Wisconsin Urban Area (USA). The study was developed in collaboration with a large number of community-based non-profits, neighborhood associations, policy makers, community organizers, and other researchers. The primary question of interest grew out of a dialogue with these collaborators over community-based evaluation needs, a desire to contribute meaningfully to a growing body of research on gardening and small-scale food production, and methodological resources available for research. The study ultimately sets out to answer the following primary research question: What is the socioeconomic value of community food production (CFP) in the Madison Urban Area and how might that value change over time? Community Food Production is the act of growing food within a community, for that community, and by that community. While CFP may take many forms, it is represented in the Madison Urban Area largely by home gardening, community gardening, food pantry gardening, and school gardening.

Active participation in food production in one form or another has been an integral part of life for millennia. However, over the past century the belief that we ought to be actively engaged in our individual food systems has nearly disappeared. This recent resolution to dissolve that responsibility or forfeit that privilege would be quite foreign to many of our ancestors, and perhaps even to our own parents. Nevertheless, the number of farms and farmers has steadily decreased while our reliance on a food system increasingly distant has increased.

Over the past decade, however, there has been a steady re-emergence of individuals and communities actively engaged in small-scale community-based food production in the form of home gardens, community gardens, school gardens, and other community food initiatives. The belief that food production is worth having some control over seems to have been re-discovered and is now touted as “revolutionary”. Humans have been uncovering an ancient yet contemporary “civic” agriculture. Authors, activists, and now the White House lawn have popularized the idea that there is great value in growing our own food, even if only a small part of our own food. But this begs the question, why? Those of us who were taught to grow our own since we were little may well find value in doing so, and certainly gardening as an American past-time cannot be disputed as a popular practice. Still it is worth asking the question: what do gardeners get out of such an undertaking, why such recent growth, is it really worth it, and if it is, then on what grounds?

THE RESEARCH

A sequential mixed methods design was used to explore system components including urban growers, the sociopolitical factors impacting those growers, the gardens they grow, and the socioeconomic value of those gardens. This case study focuses on the Madison Urban Area (MUA) as defined by the 2000 US Census urban area boundary.

The data presented in this Executive Summary focuses on community gardening and was collected in several overlapping yet methodologically distinct ways.
1. Semi-structured key informant interviews: Fifty-eight individuals representing local government, the non-profit community, home gardening groups, the nursery industry, extension services, community garden leadership, school garden administrators, and urban farmers participated in semi-structured interviews lasting between 45-90 minutes.

2. Random Sample Grower Questionnaires: Community gardens were randomly identified to receive questionnaires based on selection from a pool of all community gardens in the MUA. Once selected, the garden registrar was contacted for a list of gardener contacts. Up to twenty community gardeners from each of ten randomly selected gardens were mailed questionnaires. Questionnaires were delivered in English, Spanish, or both dependent upon language data provided by registrars. A total of 191 community gardeners were mailed questionnaires. Fifty usable questionnaires were returned (response rate 26.2%).

3. Citizen Science Test Plots: In the fall of 2009, CFP practitioners were solicited from a wide range of sources including Master Gardener groups, gardening clubs, parenting groups, faith-based leadership, community garden registrars, non-profits serving gardeners, and from the key informants initially identified in the study. Forty-eight growers representing home gardeners, community gardeners, and school-educational gardens were initially identified as willing to participate in a year-long study of garden productivity. Fourteen community gardeners participated in this data collection.

MOTIVATIONS

The motivations for participation in community gardening are widely varying. Grower questionnaire analysis suggests that community gardeners enjoy a wide range of both material and non-material benefits of community gardening. The figure below reports mean response to the following eight motivational factor prompts:

1) The money from food products I grow to sell, 2) The money I save by growing by own food, 3) Growing foods that might not be available at the store or market, 4) Concern over the environmental impact of the current food system, 5) Growing healthier food than could be purchased, 6) Therapeutic benefits of gardening, 7) Enjoyment I get from gardening, 8) Freshness of Food
Community gardeners place significantly more value than home gardeners on the economic value of the food, the ability to grow foods not available in the market, on health, and on the environment. The 2009 National Gardening Association report on reasons for food gardening additionally reports fresh food as the number one reason for participation, followed by: saving money on food bills, higher quality food, safe food, feeling productive, spending time outdoors, and getting back to the basics. Why saving money on food bills appears less important in the MUA as compared to the nation as a whole in not clear, but may be correlated with the MUA’s higher than average median household income. That said, even in the nationwide survey of motivating factors, money saved by growing food accounts for less than half of gardener’s motivations.

The motivations reported above are closely related to those reported in interviews. These motivations can be grouped into four distinct yet overlapping conversations or dialogues I have termed “food views”. They comprise what I see as the four overarching dialogues or food paradigms impacting CFP today.

**Accessible Food View**

The first of these debates has revolved around why hunger persists in such large measure in a country with so much food. Within the context of this debate, it is the often unjust distribution of food that is called into question. Growing our own in this view is thought to promote security and sovereignty precisely because of the control we explicitly exert over our food by our choice of what is planted and where it grows. Sovereignty extends beyond simple access to food but also the right to make decisions about that food.

**Healthy Food View**

The second dialogue is the one raised by the health and nutrition industry and recently popularized in the media. The debate here is not the quantity of food reaching our plates, but the
quality of food reaching our plates. What is called into question is whether or not our current food system produces the quality of food needed to sustain an active and healthy life.

**Relational Food View**

The third is actually a series of related debates about the need for stronger relationships. Many have argued that a wide range of problems stem from a lack of explicit relationship. This relationship may be between individuals, between individuals and their food, between individuals and their community, between food and the land from which it originates, or even individuals and the larger biophysical processes that sustain them. Within the context of CFP it is a relationship thought to be nurtured through the production of food.

**The Sustainable Food View**

The final dialogue has revolved around whether or not the “simple” commodity food system we rely on today can sustain itself for long. This debate, largely framed in environmental terms, is a growing one and questions the environmental impacts of a system so heavily based on remarkable resource inputs. Research, writing, and public discourse on sustainable agriculture has exploded over the past two decades and has brought with it new policies, practices, and markets. Within the context of this debate, CFP has emerged as one of many alternative agricultural strategies. CFP is valued as a “sustainable” and “resilient” component of an alternative agricultural system but also as a component of land use, design, and planning.

**BARRIERS**

The barriers defined below are barriers to further participation by those who are already participating in community gardening. They do not represent the barriers faced by non-participants. The figure below reports mean response to the following eight motivational factor prompts:

1) Available Light, 2) Interest in growing food crops, 3) Money for supplies, 4) Zoning or neighborhood policies, 5) Knowledge or training, 6) Access to land on which to grow, 7) Time to garden
Percent of *community gardeners* reporting limitations to practice as either “very limiting” or “extremely limiting”

Only the perception of policies and available light as barriers differ between home and community gardeners. Community gardeners report policies to be more limiting than home gardeners while home gardeners report light as substantially more limiting than do community gardeners.

COMMUNITY GARDEN PRACTICES AND DESCRIPTORS

Average number of hours spent gardening per week 7.34
Average number of years experience gardening 18.62
Percent of food grown that goes unused 9.65
Annual estimated food garden related expenses $118.50
Average garden size in square feet 815.26
Average age of gardener 49
Percent of gardeners with college experience 82%
Percent of female gardeners 68%
Median Household Income $67,500
COMMUNITY GARDEN PRODUCTION

Community Food Production practitioners reported daily garden-related expenses, garden-related time, and harvest weights by product type. Calorie estimates were derived from USDA estimates of calorie content per food type. Economic value is based on market value of products by type taken at ten instances over the 2010 growing season from five food outlets (2 standard grocers, 1 natural food grocer, 1 food cooperative, and 1 farmers market).

CFP production overview aggregated by garden type

<table>
<thead>
<tr>
<th></th>
<th>kg/m²</th>
<th>Dollars/m²</th>
<th>Dollars/Hour</th>
<th>Net Dollars/m²</th>
<th>Hours/m²</th>
<th>Calories/m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Gardens</td>
<td>2.13</td>
<td>15.79</td>
<td>17.01</td>
<td>11.65</td>
<td>1.06</td>
<td>627.99</td>
</tr>
<tr>
<td>Community Gardens</td>
<td>2.06</td>
<td>15.19</td>
<td>13.58</td>
<td>13.05</td>
<td>1.43</td>
<td>742.30</td>
</tr>
<tr>
<td>Educational Gardens</td>
<td>1.40</td>
<td>8.13</td>
<td>11.57</td>
<td>5.27</td>
<td>1.06</td>
<td>457.29</td>
</tr>
<tr>
<td>All Gardens</td>
<td>1.91</td>
<td>13.79</td>
<td>14.31</td>
<td>10.68</td>
<td>1.26</td>
<td>619.79</td>
</tr>
</tbody>
</table>

In terms of total material contribution to the MUA overall, absolute contributions appear significant. However, as weighted as a percent of total food sales in the MUA or percent of caloric need for the MUA as a whole, CFP comprises only .95% of anticipated food sales and only .12% of caloric need. Thus, while absolute contribution appears high, relative contribution is still relatively low. That said, individual participants, do experience significant material benefits. One home gardener, for example, produced more food in terms of economic value and caloric value than her household would be expected to consume.
Estimated material contribution of CFP in the Madison Urban Area

<table>
<thead>
<tr>
<th></th>
<th>Home Gardens</th>
<th>Community Gardens</th>
<th>Total Gardens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gardens</td>
<td>45,193</td>
<td>2,991</td>
<td>48,184</td>
</tr>
<tr>
<td>Area of Gardens (m²)</td>
<td>491,219</td>
<td>110,551</td>
<td>601,770</td>
</tr>
<tr>
<td>Kilograms of Food (kg)</td>
<td>1,048,942</td>
<td>227,857</td>
<td>1,276,799</td>
</tr>
<tr>
<td>Gross Value (USD)</td>
<td>$7,761,044</td>
<td>$1,679,761</td>
<td>$9,440,806</td>
</tr>
<tr>
<td>Net Value (USD)</td>
<td>$5,724,179</td>
<td>$1,442,997</td>
<td>$7,167,176</td>
</tr>
<tr>
<td>Calories</td>
<td>308,600,666</td>
<td>82,094,530</td>
<td>390,695,196</td>
</tr>
<tr>
<td>Percent of Total Food Sales*</td>
<td>0.78%</td>
<td>0.17%</td>
<td>0.95%</td>
</tr>
<tr>
<td>Percent of Caloric Need**</td>
<td>0.10%</td>
<td>0.03%</td>
<td>0.12%</td>
</tr>
</tbody>
</table>

*USDA Meal Plan Expense Chart (Moderate Meal Plan)
**USDA Food Intake Calorie Levels (Adjusted by age of population)

SUMMARY

In summary, community gardeners participate in community gardening and derive benefit from gardening in diverse ways. These motivations are both material and non-material. While benefits appear to extend well beyond the economic or material value of the food itself, community gardeners do experience net economic benefits from participation. The extent to which reported benefits extend beyond economic value is at least partially a product of the demographic of community garden participants. Participants in community gardening in the MUA come from a wide range of socioeconomic backgrounds. That said, on average, gardeners tend to have relatively high household incomes.

The overall material contribution of CFP, including community gardening to the MUA as a whole is currently rather small. That said, its productivity and the availability of highly productive land in and around the MUA suggest the potential for CFP to contribute meaningfully to the overall community food system is quite high.

While CFP may not be a panacea for the environmental, social, and economic challenges we face today, it does have a wide range of values. Whether you are looking for a way to unwind after a long day at work, a chance to celebrate your agricultural heritage, or just a proximate and incredibly cheap source of basil for your summer cooking, CFP has a great deal to offer. Wendell Berry urges us to

“Participate in food production to the extent that you can. If you have a yard or even just a porch box or a pot in a sunny window, grow something to eat in it. Make a little compost of your kitchen scraps, and use it for fertilizer. Only by growing some food for yourself can you become acquainted with the beautiful energy cycle that revolves from soil to seed to flower to fruit to food to offal to
decay, and around again. You will be fully responsible for any food that you
grow for yourself, and you will know all about it. You will appreciate it fully,
having known it all its life” (Berry 1990).

CFP can be a form of renewal, connection, and community. Over the past few years I
have had the chance to interact with hundreds of CFP practitioners. Their perspectives vary as
do their backgrounds and motivations, but nearly all of them feel strongly that they are doing
something of great worth. This worth is always personal, and extends for many to family,
community, and planet. Michael Pollan adds,

“To take part in the intricate and endlessly interesting processes of providing for
our sustenance is the surest way to escape the culture of fast food and the values
implicit in it: that food should be fast, cheap, and easy; that food is a product of
industry, not nature; that food is fuel, and not a form of communion, with other
people as well as with other species—with nature. The garden offers a great many
solutions, practical as well as philosophical, to the whole problem of eating
well”(2008).

The values shared by Madison area CFP practitioners include but are not limited to those
values shared by Berry and Pollan. These values are both material and non-material and vary
widely. While I offer no suggestions here for what CFP should look like now or even what it
should look like in the future, I believe the values I have shared will assist those of us charged
with the task of imagining and then implementing a healthy, sustainable, and just food system in
making those important decisions. In short, all of us are called to that task, whether it be the
decision about whether to plant a small garden in the yard, who we support in the next election,
or from whom we buy our food, the decisions we make about our food and our food system from
farm to plate will collectively decide the future of food. The role growing our own will play in
that future will depend in large measure on what and who we choose to value.